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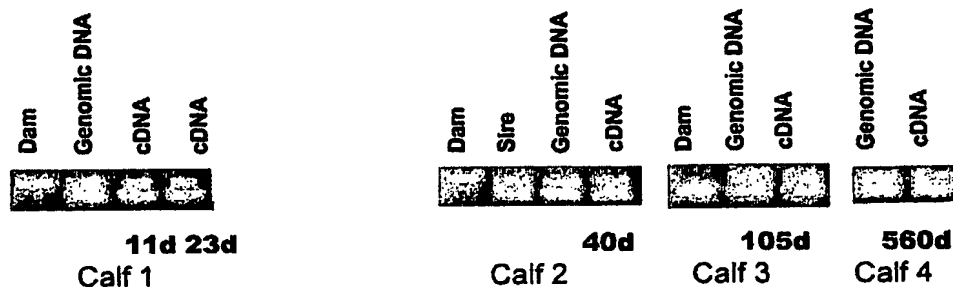
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(54) Title: IMPROVING PRODUCTION CHARACTERISTICS OF CATTLE



(57) Abstract: A single nucleotide polymorphism (SNP) in exon 2 of the cattle IGF2 gene is associated in cattle with phenotypes of increased rib eye area, decreased fat content, decreased marbling, and decreased birth weight. The presence of a C residue at position 150 of SEQ ID NO: 1, results in increased rib eye area, decreased fat content, and decreased marbling. Expression of the IGF2 gene is also affected by genomic imprinting, with the maternally derived IGF2 allele being suppressed during gestation. As a result, an offspring that obtains a paternal IGF2 allele with a C residue at position 150 of SEQ ID NO: 1 will display a phenotype of reduced birth weight as compared to offspring with a paternally derived IGF2 allele with a T residue at this position.